

6CQ8

Medium-Mu Triode— Sharp-Cutoff Tetrode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	6.3	volts
Current	0.45 ± 6%	amp ←
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:

	<i>Without External Shield</i>	<i>With External Shield[▲]</i>	
<i>Triode Unit:</i>			
Grid to plate	1.8	1.8	μuf
Grid to cathode and heater	2.7	2.7	μuf
Plate to cathode and heater	0.4	1.2	μuf
<i>Tetrode Unit:</i>			
Grid No.1 to plate	0.019 max.	0.015 max.	μuf
Grid No.1 to cathode & internal shield, grid No.2, and heater	5	5	μuf
Plate to cathode & internal shield, grid No.2, and heater	2.5	3.3	μuf
Tetrode plate to triode plate	0.07 max.	0.01 max.	μuf
Heater to cathode (Each unit)	3	3 [•]	μuf

Characteristics, Class A₁ Amplifier:

	<i>Triode Unit</i>	<i>Tetrode Unit</i>	
Plate Supply Voltage	125	125	volts
Grid-No.2 Supply Voltage . . .	—	125	volts
Grid-No.1 Supply Voltage . . .	—	—1	volt
Cathode Resistor	56	—	ohms
Amplification Factor	40	—	
Plate Resistance (Approx.) . .	5000	140000	ohms
Transconductance	8000	5800	μmhos
Plate Current	15	12	ma
Grid-No.2 Current	—	4.2	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 100	—7	—7	volts

Mechanical:

Operating Position Any

← Indicates a change.



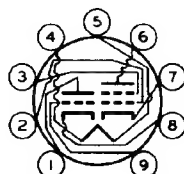
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Maximum Overall Length. 2-3/16"
 Maximum Seated Length 1-15/16"
 Length, Base Seat to Bulb Top (Excluding tip). 1-9/16" \pm 3/32"
 → Diameter. 0.750" to 0.875"
 Dimensional Outline See *General Section*
 Bulb. T6-1/2
 Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)
 Basing Designation for BOTTOM VIEW. 9GE

Pin 1 - Triode Plate
 Pin 2 - Tetrode
 Grid No.1
 Pin 3 - Tetrode
 Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Tetrode Plate



Pin 7 - Tetrode
 Cathode,
 Internal
 Shield
 Pin 8 - Triode
 Cathode
 Pin 9 - Triode
 Grid

AMPLIFIER — Class A₁

→ Maximum Ratings, Design-Maximum Values:

	Triode Unit	Tetrode Unit	
PLATE VOLTAGE	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID)			
SUPPLY VOLTAGE.	-	330 max.	volts
GRID-No.2 VOLTAGE	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
GRID-No.1 (CONTROL-GRID)			
VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages			
up to 165 volts	-	0.7 max.	watt
For grid-No.2 voltages			
between 165 and			
330 volts		See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
GRID INPUT.	0.55 max.	-	watt
PLATE DISSIPATION	3.1 max.	3.2 max.	watts
PEAK HEATER-CATHODE			
VOLTAGE:			
Heater negative with			
respect to cathode.	200 max.	200 max.	volts
Heater positive with			
respect to cathode.	200★ max.	200★ max.	volts

Maximum Circuit Values:

	Triode Unit	Tetrode Unit	
Grid-No.1-Circuit			
Resistance:			
For fixed-bias operation.	0.5 max.	0.25 max.	megohm
For cathode-bias operation.	1 max.	1 max.	megohm

→ Indicates a change.

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- ▲ With external shield JEDEC No.315 connected to cathode of unit under test except as noted.
- With external shield JEDEC No.315 connected to ground.
- ★ The dc component must not exceed 100 volts.

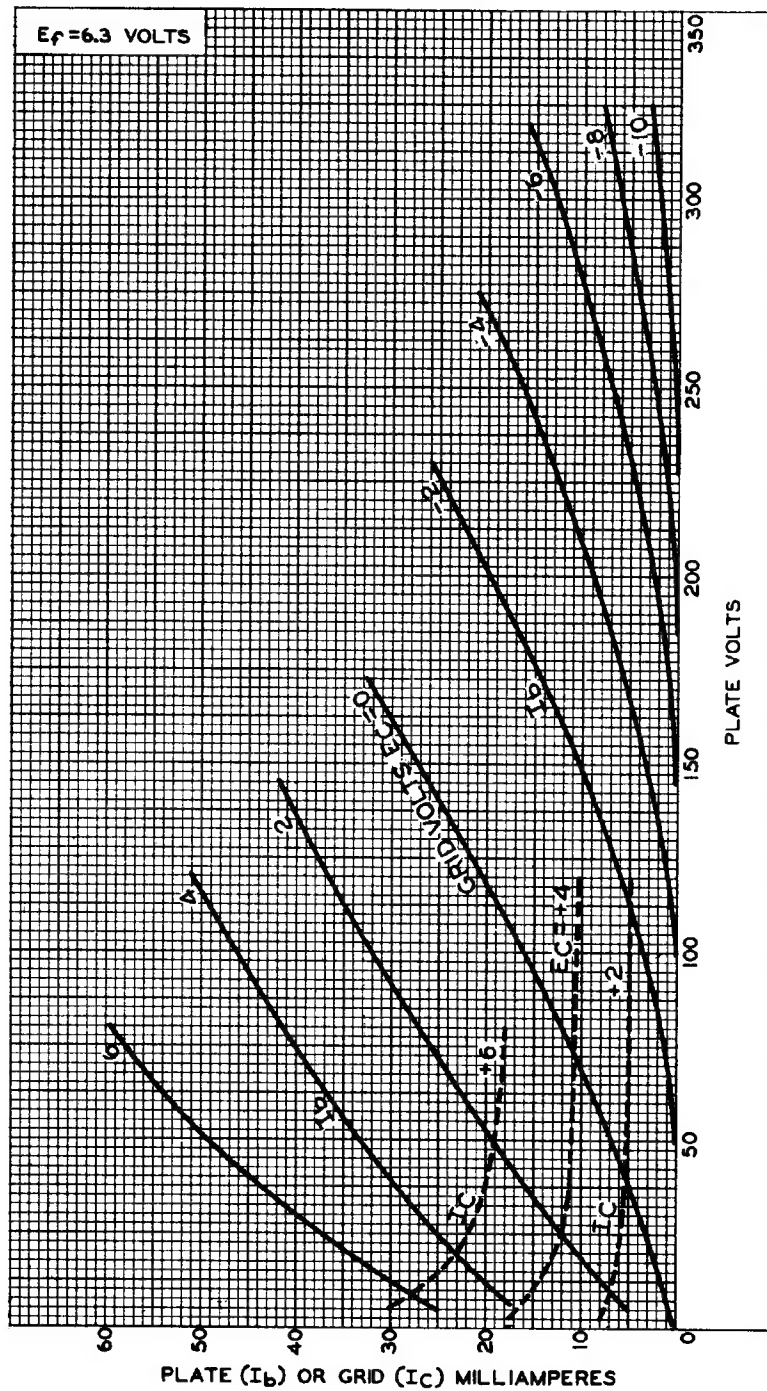


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DATA 2
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AVERAGE CHARACTERISTICS Triode Unit



92CM-9190R1

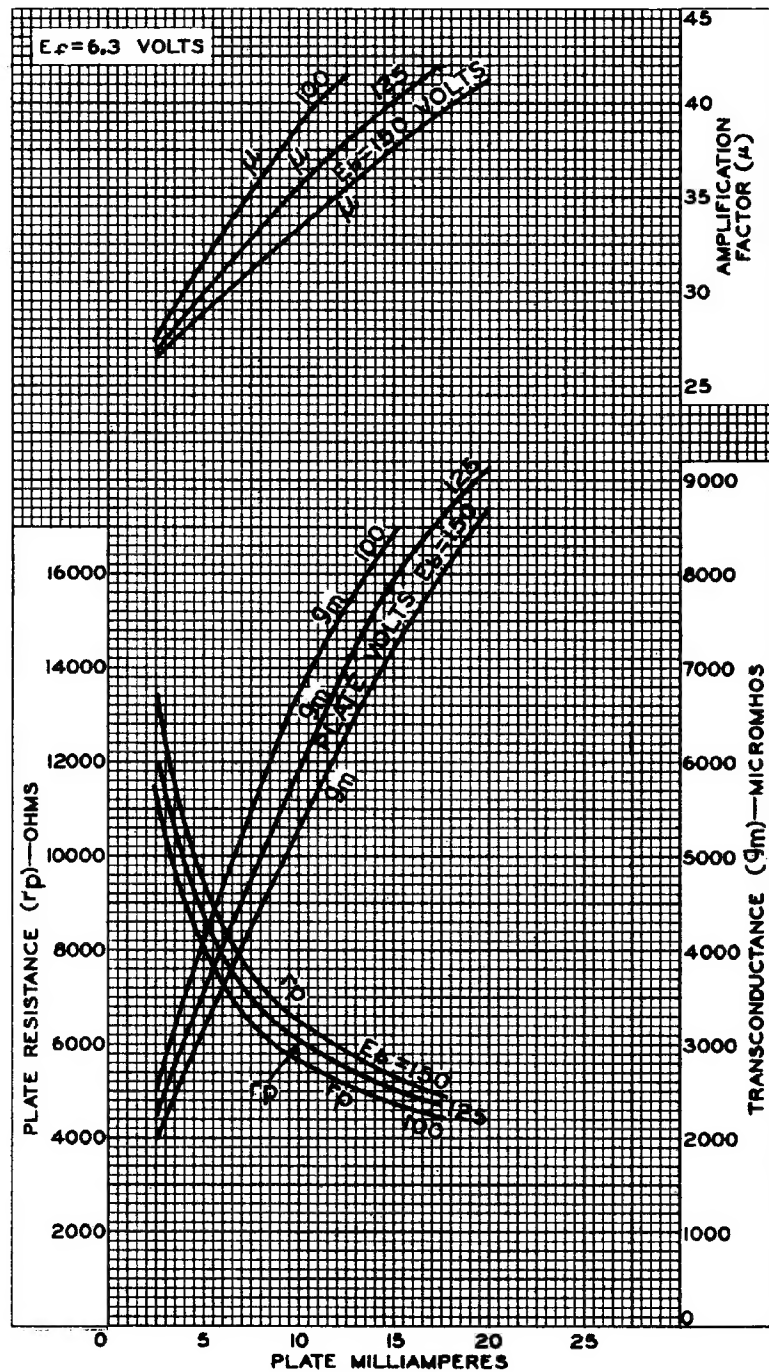
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AVERAGE CHARACTERISTICS Triode Unit



92CM-7871R1

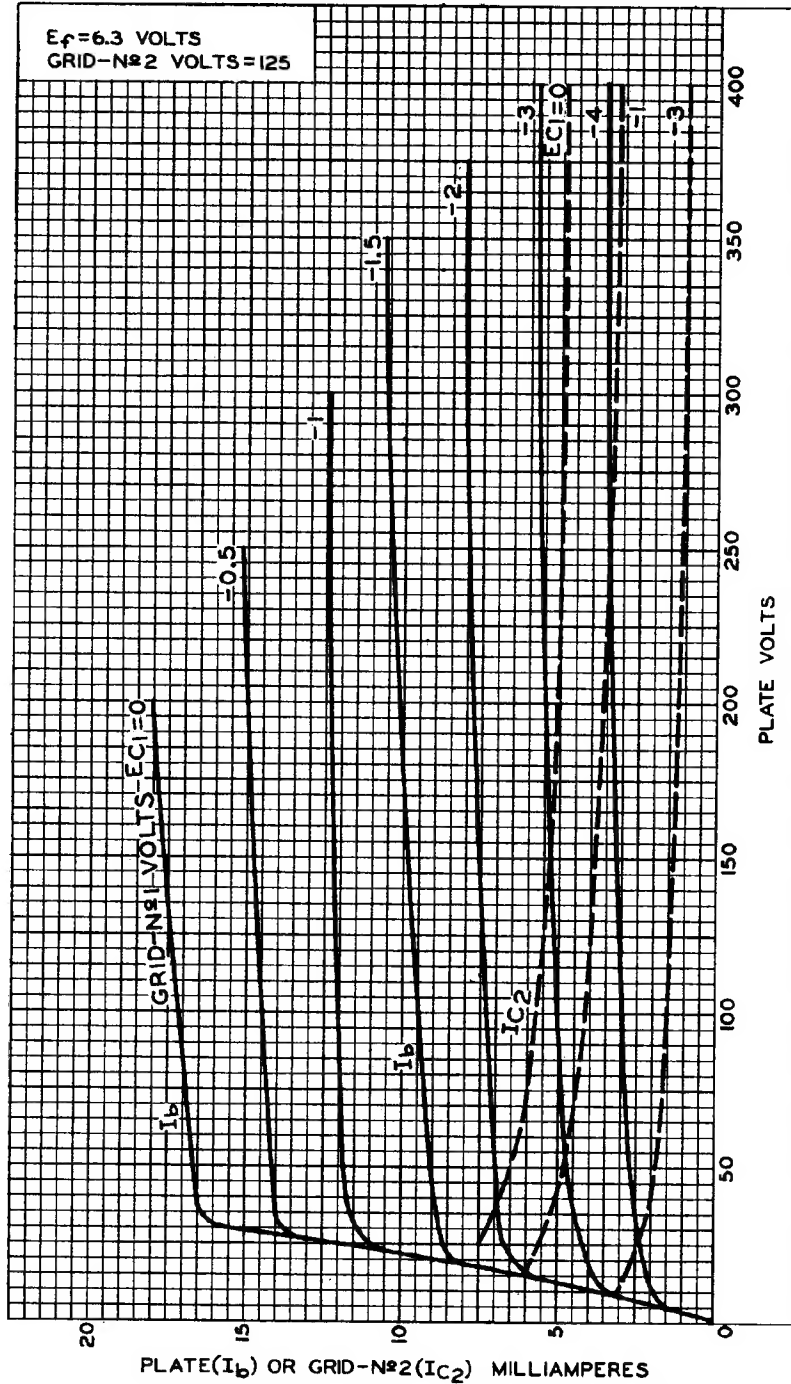


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DATA 3
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AVERAGE CHARACTERISTICS Tetrode Unit



92CM-9197

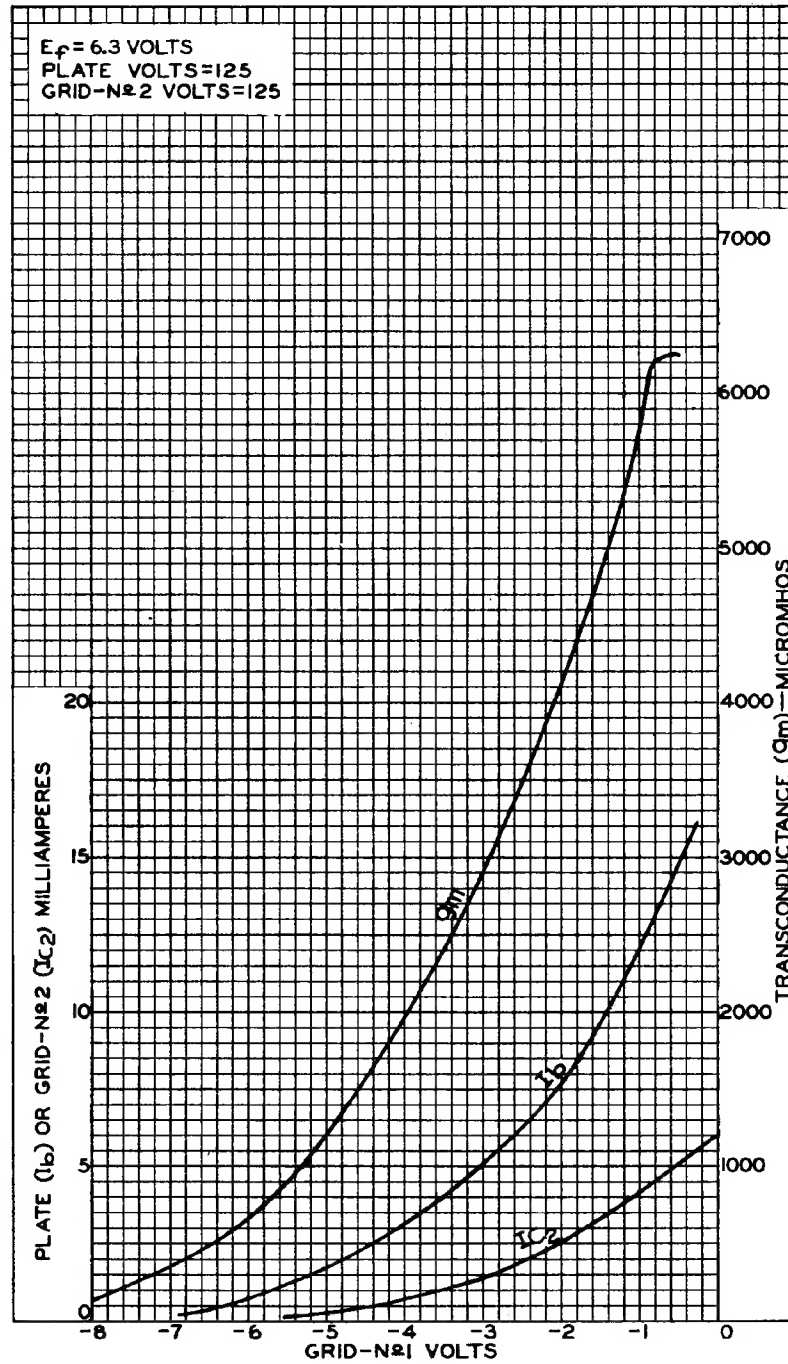
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AVERAGE CHARACTERISTICS Tetrode Unit



92CM-9195



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